

OPTIMIZATION OF EXSITING STORAGE VOLUMES IN FEDERAL RESERVOIRS IN THE DELAWARE RIVER BASIN

PURPOSE

The proposed project is a feasibility study to optimize use of the existing volumes of three federal reservoirs in the Delaware Basin to meet and balance current and future needs including: flow management, low flow augmentation, water supply, flood loss reduction, drought management, salinity control, recreation and aquatic life support. The three federal reservoirs are Blue Marsh, Beltzville, and F.E. Walter, all of which are located in Pennsylvania. Through optimization of these water resources, the many competing uses of water in the basin can be better managed for multiple beneficial uses. The authorized purposes of some of these reservoirs, as well as the Water Control Manuals (Operations Manuals) may require modification and therefore the need for the study. No new construction or structural modifications are likely to result from the study, only the better utilization of existing storage.

1. Non-Federal Interests

The Delaware River Basin Commission (DRBC) is proposing a Feasibility Study to evaluate and optimize uses of existing storage volumes in three federal reservoirs for the purposes described above. As an inter-basin Compact agency, charged with the protection of the water resources of the Delaware Basin, the DRBC is uniquely positioned to serve as the non-federal sponsor for the study. The Delaware River Basin Compact was formed among the States of Delaware, New Jersey, and New York, the Commonwealth of Pennsylvania, and the United States. Potentially, there are several other interested parties in this Feasibility Study, including the cities of New York and Philadelphia, as well as many of the basin's stakeholders which regularly follow DRBC activities as well as participate on the DRBC's Advisory Committees. The DRBC can readily engage these stakeholders to solicit their interests as well as coordinate any monetary and/or match contributions to the study.

2. Feasibility Study

The DRBC and related stakeholders are interested in a Feasibility Study for the optimization of federal reservoirs in the basin to determine if existing storage volumes at F.E. Walter in combination with existing storage volumes in Beltzville and Blue Marsh can be more efficiently and effectively utilized and optimized to meet flow management objectives including management of salinity in the estuary. This will improve conditions in the Lehigh and Delaware Rivers with higher flows and improved water quality during dry periods, while allowing potential uses of other upper basin storage for enhanced flood mitigation, fisheries support and recreation without risks to public water supply.

3. Project Purpose

The purpose of the project would be to evaluate and optimize the use of USACE reservoirs, Beltzville, Blue Marsh, and F.E. Walter, for multiple objectives. Such optimization has the potential to improve aquatic habitats, allow flexibility in basin flow management, repel salinity for the protection of industry and municipal water supplies, and overall improve the basin's resiliency to drought risk. Currently, one reservoir in particular, F.E. Walter, is only authorized for flood control and recreation. There have been some provisions made for drought emergency storage although not explicitly authorized.

4. Estimate of Total Cost of Proposed Study

Although a detailed scope has yet to be developed, it is estimated that the Feasibility Study for optimizing the use of the three federal reservoirs would be \$180,000 including non-federal cost share. This cost estimate and the related scope is subject to further refinement.

5. Anticipated Benefits

The anticipated benefits are described in prior sections and include improved use of the basin's water resources to meet the multiple, and sometimes competing, needs and uses.

6. Local Support

A feasibility study project has the general support of the basin states and the cities of New York and Philadelphia.

7. Non-Federal Financial Support

Subject to final approval by commissioners, the DRBC has the financial ability to provide a required cost share as match for the study as well as the collection of funds from other interested parties and stakeholders. The DRBC's proposed cost share would include simulation of alternatives with the flow management model of the Delaware River Basin (DRB-PST) as well as conducting and coordinating any public participation and collection of stakeholder input.

8. Letters of Support from non-Federal Interests

Letters of support will be provided by December 31, 2014.